Packet-Radio Digest   Tue, 21 Sep 93   Volume 93 : Issue 277

Today's Topics:
                     Connecting Baycom to YEASU
                   Digipeaters (one last time)
                             duplexer
                 Packet to Former Soviet Union???
                      TCP/IP Via digi (NOS)
                   Where/How to get IP address?

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 20 Sep 1993 20:54:57 GMT
From: dog.ee.lbl.gov!agate!library.ucla.edu!news.ucdavis.edu!jane.ucdavis.edu!
szhall@network.ucsd.edu
Subject: Connecting Baycom to YEASU
To: packet-radio@ucsd.edu

Right now I am using a Yeasu FT-411 with my Baycom for packet and it works
great..Someone told me I need to use a 2.2k res. on the PTT and a .1u
cap.in AFSK of the mic. input. Will this improve my performance even
better? Right now I am not using a res. or a cap. on my line between the
BAYCOM and the YEASUE..Is it worth putting these two idems in? tnx for
answering this..Jeff N6MYF

Date: 21 Sep 93 02:59:23 GMT
From: news-mail-gateway@ucsd.edu

Subject: Digipeaters (one last time)
To: packet-radio@ucsd.edu

I appreciate your response, and you (plus a few others) caught me in
an outright error. I have also figured out how I might better have
phrased my comments in a couple of other cases. Let's rehash quickly:

>>   If you would substitute "network node" (netrom node) in each ins
>>   where you used "digipeater",...
>
> I beg to differ. "A digipeater is a store and forward relay node"
> is an perfectly accurate description....

I describe how a digipeater holds data as "buffering". True store-and-
forward is a process wherein the data is available for retransmission
until it is successfully passed or the link shuts down. What is
meant by buffering is that the frame is output from the buffer one time
and then is lost. Error recovery in this case requires refilling the
buffer.

>>   Digipeating is an instantaneous retransmission mode available
>>   (unfortunately) as a "feature" on virtually all TNCs.
>
> Not so. To digipeat a packet, a TNC must receive the entire
> original packet, store it, change one bit in the address header (to
> indicate that it has repeated it), then forward it by
> re-transmitting it.

What you say is true. What I meant by instantaneous is that the frame
is retransmitted immediately without regard (or knowledge) of the
status of the next station in the path.

>>   Digipeaters do *NOT* store and forward;
>
> Yes, they do, although not at the same level of the AX.25 protocol
> as a netrom node does.

See above.

>>   they do *NOT* test the frequency prior to transmitting;
>
> The TNC uses the same timing parameters to re-transmit a digipeated
> packet as for its own packets, except that DWAIT is ignored. DWAIT
> exists to allow digipeated packets to have priority on the channel,

> but the TNC still won't key the radio for the digpeated packet if
> the channel is busy.

THIS is the error I mentioned at the top. What I should have said is

"Digipeaters transmit immediately on a clear channel without regard for
the presence of other stations."

However, DWAIT is only used by the originating station and not by any
of the digipeaters. Neither do the digipeaters use other channel
"optimizing" parms like Persistence and Slottime or the older algorithm
which multiplied TXD by a randomly selected integer in the range 0-15.
My argument against digipeating on all but the most sparsely
populated of channels is that the digipeaters tend to hog the frequency
by virtue of their priority behavior.

>>   and only at the destination station is the packet frame tested f
>
> Well, maybe, I don't know. A digipeater doesn't wait for an ACK
> packet when digipeating, but what it does with a packet with a bad
> checksum probably depends on whether PASSALL is set ON or OFF.
> Digipeating is an unconnected mode.

I should have said:
"Only at the destination station is the frame tested and an ACK sent
back over the same path to the originating station."

To the best of my knowledge, PASSALL has no effect when digipeating.
Otherwise, the problem of interference (collisions) would be compounded
by the additional "trashed" packets being forwarded which would still
be rejected at the destination.

> There are some repeaters which operate like a voice repeater: they
> receive bits on one frequency, recover the digital data, then
> regenerate the bits and retransmit on another frequency with only
> one bit time or so of delay. Perhaps you are thinking of one of
> these repeaters.

I wasn't.

>   We don't call them digipeaters here; we call
> them digital regenerating repeaters (or something similar), to
> avoid confusion.

Which brings us back to the point where this thread began. I suspect
that on several occasions your local operators have referred to the
"digital regenerating repeaters" (a real mouthful) as "digipeaters".

What I tried to say then, and repeat now, is that careless use of the
terminology (jargon) is very confusing to newcomers (and old timers,
too) and we should use caution to ensure consistency of understanding.

My error in judgement was allowing my personal bias against digipeating
as a common practice set such a strident tone to my statements.
For example:

>>   Digipeating, as a mod supported by most
>>   netrom compatible nodes. Fortunately, it can also be disabled,
>>   should be in virtually all cases.

> Digipeating is useful when a station can't hit the local netrom
> node.

I still read my last statement above to be that network nodes should
not be used to digipeat. If someone has to digipeat to uplink to a node
(a common theme in the responses) and be able to then use the network,
that is another matter.

Finally, because I didn't grow the tree, I'm just sawing the limb:

Date: 20 Sep 1993 14:23:47 GMT
From: pipex!zaphod.crihan.fr!vishnu.jussieu.fr!masi!darche@uunet.uu.net
Subject: duplexer
To: packet-radio@ucsd.edu

I'm desiging a wireless network for little mobile robots. It's a full-duplex
 communication. The name of my system is ActNet for robotic Actors Network.

Bibliography :
[Darche - Nowak 93] Ph. Darche, G. Nowak - "ActNet : A Heterogeneous Network of
 Actors for Learning of Parallelism, Communication and Synchronization"
 - NATO Series F : Computer and Systems Sciences - Springer Verlag - Liege
 - Novembre 1992 paru aussi en rapport de recherche MASI N! 93-22
 - Universie Pierre et Marie Curie - Paris.

I have to design a duplexer and I would like to know the way to specify this one
(attenuation and duplex spacing in particulary) from the features of the emitter
 (emitting frequency coverage and emission power mainly) and of the receiver
 (sensitivity and receiving frequency coverage mainly).

Specifications of the transmitter :

- FM modulation,
- transmitter power Po = 1 Watts maximum
- transmitter frequency coverage fo = (40-45 Mhz) and (70-75Mhz),
- output impedance Zo = 50 ohms,

Specifications of the receiver :

- FM modulation,
- reception frequency fr = (40-45 Mhz) and (70-75Mhz),
- input impedance Zi = 50 ohms,
- reception IC : Motorola MC3362-3363.

Channel spacing : 50 Khz.

Could you help me ?

Thanks in advance and best regards.

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          (' O-O ')
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Telephone       : 33-1-44-27-34-23   | "excuse for my french english !"
Fax             : 33-1-44-27-62-86   |        me.
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Is it possible to send a packet message into the x-Soviet Union?
Do they have packet radio there??

Steve Adams
internet - sadams@eis.calstate.edu
HAM   - KD6KGJ
Packet   - KD6KGJ@n6qmy.#nocal.ca.usa.na

Date: Mon, 20 Sep 1993 11:48:02 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
vixen.cso.uiuc.edu!moe.ksu.ksu.edu!cherokee.nsuok.edu!black@network.ucsd.edu
Subject: TCP/IP Via digi (NOS)
To: packet-radio@ucsd.edu

Is it possible to set up a digipeater to be used when telnetting?
(Even if the digipeater is not TCP/IP? (Netrom).

Thanks,
Steve Black (KC5BAU)
black@cherokee.nsuok.edu

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- N N N   N   S   S U   U   Northeastern State University   -
- N   N   N   S   U   U   Tahlequah, Oklahoma   -

Date: Mon, 20 Sep 1993 11:50:50 GMT
From: usc!howland.reston.ans.net!vixen.cso.uiuc.edu!moe.ksu.ksu.edu!
cherokee.nsuok.edu!black@network.ucsd.edu
Subject: Where/How to get IP address?
To: packet-radio@ucsd.edu

I was wondering who I need to contact to get an IP address so that I
can run NOS with a real IP address? The docs say talk to other local TCP/IP
users, but I don't know any. Anu help would be much appreciated.

Thanks,
Steve Black (KC5BAU)
black@cherokee.nsuok.edu

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- N   N   SSSS   U   U   -
- N N N   N   S   S U   U   Northeastern State University   -
- N   N   N   S   U   U   Tahlequah, Oklahoma   -

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